



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,943	11/09/2001	Christopher J. Conway	9858-000039	8445

7590 08/23/2004
Kelly K. Burris, Esq.
Harness, Dickey & Pierce, P.L.C.
Suite 400
7700 Bonhomme Avenue
Saint Louis, MO 63105

EXAMINER

GILMAN, ALEXANDER

ART UNIT PAPER NUMBER

2833

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/039,943	CONWAY ET AL.	
	Examiner	Art Unit	
	Alexander D Gilman	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-10, 13--18, 20-31, 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-10, 13--18, 20-31, 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2833

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 4, 5, 7-10, 13,14,16- 18, 20, 23, 25, 27, 28, 30, 31, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable Boisvert et al in view of Freerks.

With regard to claims 1, 4, 5, 9, 10, 13, 14, 17, 18, 27, 28, , 37, Boisvert et al (US 5,187,277)

(Fig. 7b) discloses a pin (310) with an o-ring groove disposed around the cylindrical portion of the sealing cylindrical member, wherein a cylindrical surface and distal end of the pin being recessed within the connector (203)

Boisvert et al do not disclose a removal slot which is approximately perpendicular to the o-ring groove.

Freerks discloses o-ring removal slot (50) perpendicular to the o-ring groove.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Boisvert et al with o-ring removal slot, as taught by Freerks, to simplify removal of o-ring from the pin.

With regard to claims 7, 16, 31, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a plurality of o-ring removal slots into sealing member, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

With regard to claim 8, Boisvert et al disclose (col. 9, lines 49-56) a housing of connector connected to a torch lead.

With regard to claims 20, 25, Boisvert et al when modified by Freerks discloses (Freerks, Fig. 4) an o-ring removal slot (50) perpendicular to the o-ring groove.

Art Unit: 2833

With regard to claim, 23 Boisvert et al when modified by Freeks discloses (Boisvert et al) a groove disposed around an outer surface of the sealing member.

With regard to claim 30 Boisvert et al when modified by Freeks discloses (Boisvert et al) that the sealing member is a main power socket for use in a plasma arc cutting apparatus.

1. Claims 18, 24, 27, 28, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mengle in view of Freeks.

With regard to claims 18, 27 and 28, Mengle (US 3,557,848) discloses (Fig. 1) a sealing member (13) with a o-ring shoulder (14) disposed around an cylindrical surface of the sealing member.

Mengle does not disclose a removal slot.

Freeks discloses o-ring removal slot (50) perpenicular to the o-ring groove.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the Mengle's sealing member with o-ring removal slot, as taught by Freeks, to to simplify removal of o-ring from inside of the tubular sealing membe. .

With regard to claim 30, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham, 2 USPQ2d 1647 (1987)*.

With regard to claims 26, 31, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include a plurality of o-ring removal slots into sealing member, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co., 193 USPQ 8*.

2. Claims 15, 21, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boisvert et al in view Freeks and further in view of Nejad.

Boisvert et al when modified by Freeks discloses all of the limitations except for chamfered edges of the removal slot.

Nejad (US 5,564,175) discloses chamfered edge of the removal slot (326).

Art Unit: 2833

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the sealing member with chamfered edges, as taught by Nejad, to insert a tool from a convenient position.

3. Claims 6 and 15, are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Freeks as applied to claims 1 and 10 respectively, and further in view of Nejad.

The admitted prior art when modified by Freeks discloses all of the limitations except for
chamfered edges of the removal slot.

Nejad (US 5,564,175) discloses chamfered edge of the removal slot (326).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the sealing member with chamfered edges, as taught by Nejad, to insert a tool from a convenient position.

1. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mengle in view of Freeks, as applied to claim 27, and further in view of Nejad.

Mengle when modified by Freeks discloses all of the limitations except for
chamfered edges of the removal slot.

Nejad (US 5,564,175) discloses chamfered edge of the removal slot (326).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the sealing member with chamfered edges, as taught by Nejad, to insert a tool from a convenient position.

Response to Arguments

Applicant's arguments filed 05/17/2004 have been fully considered but they are not persuasive.

Regarding claims 1, 10, 18, 27, 37, Applicants argue that Boisved et al. fail to disclose or teach a device (pin) being recessed within a housing, wherein the o-ring is inaccessible for removal.

Art Unit: 2833

As it was shown in this rejection, Boisved et al (which is a primary reference) disclose (pin) being recessed within a housing (300, 203). It is necessary to protect the pins 305, 306 conducting respectively plasma gas and secondary gas from mechanical damages with hood before and in process of mating. Also it is well known in the art (For example US 4,245,875) protect conducting pins with hood.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

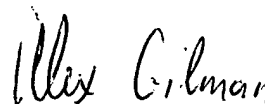
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D Gilman whose telephone number is 571 272-2004. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571 272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2833

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

08/16/2004

A handwritten signature in black ink, appearing to read "Alex Gilman".

ALEXANDER GILMAN
PRIMARY EXAMINER